A Post-Succession Analysis of Factors Influencing Coaching Success in NCAA Division I Men's Basketball

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Based on the reciprocal determinism component of social learning theory, a total of 736 men's NCAA Division I basketball coaching changes between 1999 and 2014 were examined to establish which factors were related to conference success following a coaching change. Results from an exploratory latent class analysis indicated that many demographic, environmental, and experiential variables assumed to be important in hiring a new coach are insignificant. However, a program's previous success, individual coaching ability, and previous coach vacancy circumstance are all significantly related to conference winning differential after a coaching change. Results also indicated a regression to the mean occurs after most coaching changes except for the most elite programs. Pragmatically, however, findings show relatively small increments in winning or losing following a coaching change, suggesting that the impact of a coach is often overstated. Stakeholders can use this information to evaluate coaches, programs, and hiring practices in men's Division I basketball.

Keywords: coach succession, men's basketball, college sport, reciprocal determinism

Coaching succession is common and highly publicized for National Collegiate Athletic Association's (NCAA) Men's Division I basketball programs. Entering the 2015-16 season there were 40 new coaches at Division I institutions (Goodman, 2015) accounting for more than 11% of the 351 teams. The frequency of coaching turnover at the highest level of college basketball is not a surprise considering the popularity and economic impact of men's basketball. The 2015 NCAA men's Division I post-season tournament was the most-consumed NCAA tournament in 22 years, with 11.3 million viewers per game, 80.7 million live video streams, and 350 million total impressions on social media (NCAA, 2015a). The 2015 tournament generated over $1 billion in television advertising revenue as part of a 14-year, $10.8 billion deal for the television rights that redistributed $5.44 million to Division I institutions (NCAA, 2015b). As the leaders of these teams, Division I men's basketball coaches' salaries are often in the millions with large buyouts for coaches who have not reached the end of their contracts (USA Today, 2017). These numbers indicate Division I men's basketball is a significant contributor to the popularity and fiscal stability of intercollegiate athletics, and that head coaches are often among the highest paid professionals at their institutions (Gaines, 2016).

Given the relative economic and public relations impact of men's basketball, stakeholders routinely monitor the performance of their teams. Coaches are often publicly and internally scrutinized for their ability to navigate this high-stakes environment. Whether it is pressure from athletic personnel, university administration, alumni, or fans, coaches who struggle to fulfill expectations can find themselves out of a job. Still, other coaches leave for positions that are more prestigious, or for retirement. Thus, athletic directors regularly find themselves conducting coach searches that necessitate a variety of financial and human capital (Adler, Berry, & Doherty, 2013). Studies that empirically inform these hiring practices, particularly for hiring elite college or professional coaches, are sparse. The purpose of this study was to extend the previous literature and theory on coaching succession, and provide empirical support for hiring considerations through the examination of variables thought to affect the success of NCAA Division I men's basketball coaches.

Because of the inconclusive and multicontextual settings of coaching, as well as the limited information about sport-related variables used in the hiring process, Giambatista, Rowe, and Riaz (2005) encouraged additional investigation of new factors, definitions of success, time frames, and theoretical contributions. With these suggestions in mind, the current study makes two important contributions to the existing sport leadership literature. First, the study adds to coaching succession literature by examining pre and post succession experiences relative to conference winning differential within the highest level of intercollegiate basketball. Second, this study provides empirical evidence for a variety of demographic, experiential, personal, and environmental variables that would potentially influence success based on social learning theory and reciprocal determinism. In addition to theoretical implications, these contributions can pragmatically assist stakeholders in the appraisal of potential coaching candidates.

Review of Literature

Succession of college and professional coaches fall under the larger framework of leadership succession. Most of the literature focuses on succession at the top levels of business

management (see Giambatista et al., 2005). Early business succession studies examined the perceived impact of leadership, with an assumption that changing leadership would change the environment (Lieberson & O'Connor, 1972). Studies focused largely on inside vs. outside successors with little consistency among findings, due largely to fluctuating stock market conditions and structural differences among companies (Giambatista et al., 2005). Recent research has focused on the consequences of post-leadership change such as return on investment (Ang, Lauterbach, & Vu, 2003). While these studies did see increased validity, the business environment still offered inconsistent findings due to market conditions and differing contexts (Giambatista et al., 2005). The present research seeks to shed important insight on studying leadership succession in a context where consequences can be consistently compared.

Winning, Sport Succession, and the Original Three Theories

Sport is an ideal context to study organizational behavior because of the regularity and popularity of sport, the immense amount of data available, and the ability to explore relatively similar environments across subjects (Wolfe et al., 2005). Wins and losses are objective measures. Winning is a logical measure of comparison among coaches because it is easier to compare coaches competing within the framework of the same rules than it is to account for unstable market conditions (Cannella & Rowe, 1995). While there are a variety of appropriate ways to evaluate college coaches (e.g., academic outcomes, ethical behavior, athlete satisfaction; Cunningham & Dixon, 2003), winning is often the most visible metric for elite level coaches, and can affect other critical areas such as revenue and television ratings (Fizel & D'Itri, 1997; Lewis, 2004).

Beyond identifying winners and losers, college sport offers other suitable characteristics to evaluate leadership changes. Rowe, Cannella, Rankin, and Gorman (2005) noted that sport leadership is under constant scrutiny by stakeholders, which makes coaching changes customary. Organizations must follow the same NCAA rules, which makes the comparison of leaders in similar settings possible. College sports is particularly suitable because coaches are involved in the long-term planning of their program through recruiting players and hiring assistants (Rechner & Dalton, 1991; Soebbing & Washington, 2011). Professional sports coaches are typically more limited to in-game strategy with some, although not as significant, personnel input (Day & Lord, 1988; Smart, Winfree, & Wolfe, 2008).

Given that sport offers an excellent environment to study leadership succession, researchers have investigated coaching succession primarily using three theories - with seemingly contradictory findings. Grusky (1960) first argued that changing leadership was counter-productive because it destabilizes work environments and forces adaptation to a new system, thus reducing organizational effectiveness through continued replacement of leadership. This idea, known as *vicious circle theory*, suggests that changing leadership is harmful. Some studies have supported this contention, including Brown's (1982) research that found within-season coaching changes harmed performance of National Football League (NFL) teams. Other researchers found performance worsened because of a coaching change in English professional football (Audus, Dobson, & Goddard, 1997), the National Basketball Association (NBA; Giambatista, 2004), and the National Hockey League (NHL; Rowe et al., 2005). In college sport, Fizel and D'Itri (1999) found that institutions that fired their men's basketball coach due to losses performed worse following the change. Adler et al. (2013) found comparable results for

college football coaches, where poor-performing teams remained poor after the coaching change and mediocre teams performed worse.

In a later contrast to his vicious circle theory, Grusky (1963) acknowledged that changes in leadership could improve performance under certain conditions. Improvement is the expected outcome, especially following the removal of an unsuccessful coach. This belief, known as *common sense theory*, suggests that changing leadership will result in renewed enthusiasm leading to progress. Some professional sport studies indicate improvement can occur in certain contexts. Allen, Panian, and Lotz (1979) found that between-season changes and internal coaching replacements had a more positive effect on Major League Baseball (MLB) team performance than within-season changes, even though the impact was minor. Kahn (1993) and Singell (1993) also confirmed a coaching change could minimally improve performance for MLB teams. Pfeffer and Davis-Blake (1986) and Holfler and Payne (2006) found that hiring coaches with the most experience would improve NBA team performance. Elsewhere, Dawson and Dobson (2002) found previous playing experience and managerial efficiency contribute to a new coaches' performance within English football. Lastly, at the college level, two FBS football studies revealed that small-revenue teams can improve in the short term by replacing poor-performing coaches (Dohrn, Lopez, & Reinhardt, 2015), or improve if they can replace coaches who are not specifically strong in recruiting or utilizing talent (Maxcy, 2013).

Ritual scapegoating theory has garnered the most support. Ritual scapegoating predicts little or no influence on team performance following a coaching change. Gamson and Scotch (1964) pioneered this theory when they found that MLB on-field coaches have little impact because they have limited influence on securing talent. Within MLB, this theory has much support and indicates that the context of MLB is one in which the coach may indeed be a scapegoat for poor performance (Canella & Rowe, 1995; Fabianic, 1994; Gamson & Scotch, 1964; Smart et al., 2008; Smart & Wolfe, 2003). Further evidence from the NFL (e.g., Brown, 1982) indicated between-season coaching replacements did not affect performance. For professional soccer in both the Dutch Premier League (Koning, 2000) and Italian leagues (De Paola & Scoppa, 2012) team performance and points per match did not improve with coaching changes. McTeer, White, and Persad (1995) found no long-term impact due to changing coaches in four primary sport leagues in North America (MLB, NBA, NFL, NHL). Again, at the college level, Dohrn et al. (2015) found that for large FBS football programs, coaching changes did not matter, probably due to the resources and culture in place at large universities.

Social Learning Theory and Reciprocal Determinism

Although there are some cases in specific contexts where improvement is noted, most of the literature inside and outside of sport suggests that changing leadership has little or no positive impact on performance (Andersen, 2011). Despite this evidence, the college coaching carousel is always spinning as stakeholders pressure athletic directors to make changes in hopes that a new coach will breathe life into a struggling program (Adler et al., 2013). It is this inevitable pressure to replace struggling coaches, as well as replacing coaches who have left for more prestigious positions, which leaves athletic directors with expensive and time-consuming coaching searches. Ironically, there is little empirical data to assist athletic directors in these hiring decisions. This leaves athletic directors and search committees largely with educated guesses and gut-feelings about factors that may or may not be associated with success.

In an effort to build on coaching succession literature, the current study falls in line with recommendations from Giambatista et al. (2005) who suggested moving beyond the big three theories of leadership succession to better understand the practical implications of leadership change. In this regard, a variety of different environmental, individual, and behavior factors were considered. These factors are the basis for reciprocal determinism, a critical component of Bandura's social learning theory (Bandura, 1977). Social learning theory proposes that experiences cause learning. According to Bandura, learning can occur through both observation and interaction, and is fundamentally a cognitive process. Bandura's work also led to more occupationally-relative social learning theories such as Krumboltz, Mitchell, and Jones' (1976) *social learning theory of career decision-making.* This theory explains how skills are accumulated through educational and career choices, and how one would ascend in a profession by leveraging their experiences into field-specific attributes. The more experience someone acquires, the more qualified they become for the next occupational step, which is generally what the literature supports (Bosch, 2014).

Reciprocal determinism is the component of social learning theory that explains human behavior (and career decision-making; Krumboltz et al., 1976) by assuming the individual is an active learner. Learners are influenced by personal cognitive factors (e.g., knowledge, expectations, attitudes), environmental factors (e.g., social norms, ability to alter the environment), and behavioral characteristics (e.g., skills, self-efficacy, repetition). These factors are continually and reciprocally influencing an individual throughout their life in a way that reinforces long-term learning (Bandura, 1977). In a coaching context, for example, the quality and knowledge of the game and coaching philosophy (i.e., personal cognitive factors) would be dependent on where a coach had spent their playing and coaching careers (i.e., environmental factors), as well as what roles they were fulfilling in those positions (i.e., behavior/skills). A coach who played at a high level and moved through the coaching ranks under successful mentors on successful teams would likely be viewed as a strong coaching candidate because of the learning that ostensibly took place in those environments. On the contrary, coaches who did not play the game, had no experience as a head coach, or were part of unsuccessful teams may have less knowledge. This simplified example demonstrates how cognitive, environmental, and behavioral variables could help to evaluate a coaching candidate, and how reciprocal determinism could help identify variables influential to coaching success.

More explicitly, the current study chose to include eighteen variables that could impact coaching success. While there are conceivably an unlimited number of variables that could impact the coaching scenario above, the variables chosen explicitly for this study have been supported by research and anecdotal inference. The environmental (e.g., contextual factors) are at the forefront of this investigation given the emphasis on context from previous succession studies (Giambatista et al., 2005). Specifically, the circumstance of the coaching change (i.e., positive vs. negative), as well as the influence of performance during the coaching change (i.e., performance-related vs. nonperformance-related) has been termed vacancy situation. Negative athletic performance vacancy situations have been shown to decrease team academic performance (Johnson, Pierce, Tracy, & Ridley, 2015), suggesting the previous environment could play a role in a new coach's success. This finding also extends to the previous coach's tenure and win differential, both of which are components of the environment prior to a coaching change. Evidence suggests that the longer a coach's tenure, the more success they accomplish, thus ensuring a positive environment prior to a coaching change, and more influence from mentors (Chartrand, Robbins, Morrill, & Boggs, 1990; Erickson, Côté, & Fraser-Thomas, 2007).

Additionally, Pfeffer and Blake (1986) and Canella and Rowe (1995) found that coaches with the best win/loss records and a background of improving teams had the most success after being hired for a new position.

More specific to an intercollegiate environment, the nature of the institution (public/private), enrollment of an institution, and arena capacity are proxy variables for an institutional profile, none of which are well examined in a coaching succession context. Given the emphasis on elite college athletic programs as revenue and public relations tools (Knight Commission, 2017), it is worthwhile to know if the institutional size and facilities are related to success. Similarly, the number of NBA picks has not been evaluated in a succession capacity, but evidence suggests that a strong tradition or nostalgia of a program has an impact on the perception of that program, likely influencing stakeholders to value such a program (Johnson, Giannoulakis, Tracy, & Ridley, 2015).

Beyond environmental variables, the behavioral variables appear critical to understand coaching success as well. Smart et al. (2008) recognized the importance of human capital skills necessary for baseball managers (Smart & Wolfe, 2003). They explained that due to what Singell (1993) called *baseball-specific human capital*, current players responded better to coaches who had playing experience. Smart et al. also noted that the number of years and types of experiences (e.g., within the industry or on a specific team) could influence leadership effectiveness. Bosch (2014) noted the level of the new coach (i.e., from more or less prestigious coaching position) had an impact on coaching success. Specifically, having experience as a head coach at a power conference school increased winning percentage after a coaching change. Thus, conference affiliation, from both a prestige and familiarity perspective, suggests a link to coaching success. Additionally, Ehrhardt, McEvoy, and Beggs (2011) noted that college coaches hired outside of the program did significantly better than inside successors after a coaching change, which suggests that origin of the coach is important. This finding also magnifies a clear difference between leadership succession in business, where inside successors were most successful (Giambatista et al., 2005).

The cognitive factors identified within reciprocal determinism at the time of a coaching change are clearly the most challenging to ascertain, as it is impossible to know the knowledge and attitudes of coaches when succession took place. Determining the basketball IQ or the leadership philosophy of a coach could provide some unique insight to accompany environmental and behavior variables at the time of a coaching hire (Bloom, Crumpton, & Anderson, 1999). Alas, this information is unavailable. Despite this limitation, the current study does assess educational level because of its implied connection to coaching knowledge. Consequently, it is apparent that the cognitive portion of reciprocal determinism is more suited to individual analysis at the time of a hire (e.g., within an interview).

Although both empirical and anecdotal evidence suggest that the aforementioned variables are influential in the success of a new coach, Giambatista et al. (2005) warned to:

> ...not draw conclusions based wholly on associations with prior performance, which might be only one of several factors in play. Rather, scholars should select settings and samples that allow observing how performance interacts with other factors over a longitudinal plane. (p. 969)

Rowe et al. (2005) and Dohrn et al. (2015) further noted that examining the component of time (i.e., a longitudinal plane) is an important concept in social learning theory because learning

takes place over time. As coaches spend time in their pre-head coach positions, as well as in the head coach position, learning will theoretically occur. However, several studies have found that the more time and experience, combined with favorable environments, do not always produce successful coaches (Bosch, 2014; Dohrn et al., 2015; Holmes, 2011). For example, Rowe et al. (2005) found NHL coaches must be given time between seasons to make an impact on the following season. Dohrn et al. (2015) examined college football coaching changes for four years after a coaching change. This longitudinal analysis indicated that time compression diseconomies were occurring, which impacted programs differently based on different time frames and resources. Similarly, Holmes (2011) found that more recent coaching performance was an indicator of college football coach evaluation, but the environmental components of organizational expectations, allegiances of an organization, and the tenure of a head coach moderated the findings.

To date, only a handful of variables have been examined relative to time and coaching success, particularly in college sport (Bosch, 2014; Dohrn et al., 2015; Holmes, 2011). Using social learning theory and reciprocal determinism as a foundation, the current study dramatically expands the contextual examination of coaching success by investigating environmental, behavioral, and cognitive variables that would be theoretically impactful under social learning theory four years prior, and four years after a coaching change. Because some of the variables have not been studied in a succession context the following research is exploratory in nature, and attempts to identify variables that could affect success as understood through the lens of reciprocal determinism. The following research question was used to guide this study:

Research Question: What variables impact conference coaching success for men's NCAA Division I basketball programs?

Method

Data and Sample

A total of 736 individual NCAA Division I men's basketball head coaching changes were examined in this study. Coaching changes between the 1999-2000 to 2013-2014 academic years were investigated. This time frame was chosen due to availability of information and the ability to examine changes post-coaching succession (i.e., four years post-succession). Data were collected from official online archival sources, which included intercollegiate athletic department websites, institution websites, team media guides, media articles, and the Equity in Athletics Disclosure Act database. The sample included all coaching changes across the time period examined, even if coaching changes happened at an institution more than once. Each coaching change was evaluated as its own case.

Variables

The dependent variable was calculated in several steps. First, the average conference win differential per year for each team (number of wins minus the number of losses) was calculated for the four years prior to the coaching change. While win differential and winning percentage are essentially the same measure (percentage as ratio versus win differential as whole number), win differential allows for easier and potentially more meaningful interpretation of the results.

For example, when using win differential in a regression, a coefficient of .1 equals a difference of one/tenth of a game, whereas when using winning percentage, a coefficient of .1 represents one/tenth of one percent of winning percentage. In this study, the interpretability of a win difference is simpler than the difference of a percentage of games. The same average conference win differential was calculated for up to four years following the coaching change. Four years of performance is used here to balance the shorter-term tenure of unsuccessful coaches versus the potentially longer tenure of successful coaches. Four years is considered an adequate time to measure performance by stakeholders, and additional time is not necessarily a factor for increased performance (Bosch, 2014). In cases where a subsequent change occurred in less than four years, the time available was used (one - three years).

Conference performance was chosen instead of overall performance to help control for variations in out-of-conference scheduling that can occur throughout Division I men's basketball, as well as post season play that could have an impact on overall record. Per Canella and Rowe (1995), assessing an institution against peers in its conference also allows for a more realistic assessment of coaching influence because conferences tend to have similar institutional profiles and resources among its members. Therefore, the dependent variable is the average per year conference win differential following the coaching change, minus the average per year conference win differential prior to the coaching change.

Seven total factors and 17 individual variables were considered as potential influencers of team success following a coaching change. Three factors were unique to the coach: 1) new coach level of experience (i.e., playing experience, previous job, and years as a head coach), 2) previous performance (i.e., career win differential), and 3) demographic characteristics of the coach (i.e., education, race, and age). Gender was excluded because all cases were male. Two factors related to the institution itself: 4) basic characteristics (e.g., funding source, arena capacity, and enrollment) and 5) program's previous performance (i.e., previous coach tenure, previous coach wins, and NBA draft picks). The final two factors related to the situation surrounding the coaching change were: 6) the nature of the need for the coaching change (e.g., performance vs. nonperformance and positive or negative change) and 7) the source of the new coach (e.g., new coach previous level, internal vs. external, and conference experience).

Although the nature and need for the change (i.e., vacancy situation) is largely manifest content, it was important to be specific about what constituted performance changes and positive/negative situations. Clarity is particularly important considering the multi-layered approach to coaching performance appraisals that indicates many behaviors and outcomes are involved in coaching evaluation (Cunningham & Dixon, 2003). Two coders independently coded changes using press releases and other media (e.g., newspaper), and compared results after all data were collected. Both coders agreed on 100% of the cases, confirming the data as manifest content. Performance changes were defined as a change in position as a result of the athletic performance of a team (i.e., win/loss record). Negative performance changes were characterized by low winning percentages, which resulted in the coach being fired. Negative nonperformance changes were the result of coach dismissal due to reasons other than winning (e.g., rules violations). Positive performance changes indicated that coaches moved to another (usually more prestigious program) because of their success. Positive nonperformance indicated that coaches left their coaching positions in good standing for reasons other than winning (e.g., retirement). See Table 1 for more specific descriptions of the variables used in the study.

Table 1

Factors, Items, and Descriptions

Factor	Items	Descriptions
Coach's Demographic Classes		
Education level	Bachelor	Highest level of education achieved
	Master	
Minority status	Caucasian	
	Minority	
Age	*(means)*	
Coach's Experience Classes		
Playing experience	College	Highest level of playing experience for the head coach
	Professional	
	No Pro or College	
Previous job	Assistant Coach	Coach did not have head coaching experience
	Head Coach	Coach had head coaching experience
Years coaching	*(means)*	Years of coaching experience
Yrs head coach	*(means)*	Years of head coaching experience
Coach's Ability		
Performance as a Head Coach	*(means)*	Career win differential as a head coach
Vacancy Situation		
Circumstance	Positive	The circumstance around the change was positive
	Negative	The circumstance around the change was negative
Performance based	Performance	The change was due to performance reasons
	Non-performance	The change was not due to performance
Hiring Factors		
Level hired from	One level down	Previous school was at lesser competitive level (move from non-BCS, Division II or III, or HS to BCS level)
	Same level	Previous school was at same competitive level
	One level up	Previous school was at higher competitive level (move from BCS or NBA to non-BCS)
Origin of the coach	Interim	Coach hired after being interim coach
	Internal, not interim	Coach hired from the prior coaching staff Coach
	External	hired from outside the university
Conference affiliation	Yes	Did the coach have experience coaching previously
	No	in the same conference?
Institution Characteristics		
Funding source	Private	Private or public school
	Public	
Arena Capacity	*(means)*	Seating capacity of home arena
Enrollment	*(means)*	Total institutional enrollment
Program's Previous Success		
Coach's tenure	*(means)*	Previous coach's tenure (years)
Coach's wins	*(means)*	Previous coach's wins per season
NBA Picks	*(means)*	Total number of NBA draft picks

Data Analysis

Each variable was examined by category to determine which impacted performance after a coaching change. A linear mixed-effects model procedure was implemented to employ restricted maximum likelihood algorithms to account for asymptotic models and to allow the integration of both nominal and scale variables into the same model (SPSS Guide, 2012). A logical next step in the process would be to develop a general linear model that includes all items. However, the number of categorical variables and categories within each included 477 observed outcome-combinations, which creates a difficulty for mathematical calculation due to the limited number of complete cases in the sample (664) versus number of paired comparisons. Therefore, it was necessary to reduce the number of variables prior to conducting additional analysis. Due to the inclusion of both continuous and categorical data, this study used a procedure known as Exploratory Latent Class Analysis (LCA) to reduce the data to one item per factor, similar to factor analysis with continuous data (Geiser, 2013).

LCA not only allows the analysis of data with a large number of variables with a small sample size, but resulting groups mirror *real life* when describing a group of items. For example, it is common to use general descriptors for groups, such as describing an institution as a public university with a large budget, or describing a head-coach candidate as young and inexperienced. Thus, LCA is a statistical procedure that is used to classify individuals into fairly homogeneous subgroups (Geiser, 2013). As opposed to the correlational analysis used for exploratory factor analysis, LCA identifies relationships present in the data through examination of conditional probabilities of certain response profiles to the factor items. Individual class membership is assigned based on the result of both latent class prevalence (the strength of probability that the class exists) and the class specific response probabilities of relevant items (the strength of probability the class exhibits a predictable response profile; Clogg, 1995; Geiser, 2013).

Three factors of data were reduced using the statistical program M-Plus (Muthen & Muthen, 2010), following the procedures for LCA presented by Geiser (2013; see below for further description). Using these class assignments for each case along with the single variable measuring previous coaching success, a linear mixed-effects model procedure was conducted to identify which categories have a relationship with changes in the number of wins following a coaching change.

Results

The first step was to examine the relationship between each of the items and the dependent variable of average per year conference win differential following a coaching change. This within category analysis indicates six individual items that were significant (see Table 2 for results). Within the coach's demographic category, only the dichotomous variable of minority status was significant with differences between minority (mean win differential = -0.357) and Caucasian (mean win differential = 0.360) ($F = 3.757$ $p = 0.024$). Within the category of coach's experience, the continuous variable number of years' experience as head coach was significant (b = 0.065, $F = 3.904$, $p = 0.049$). Coach's ability was measured using the continuous item of career win differential and was found to be significant (b = 0.080, $F = 21.598$, $p < 0.001$). Within vacancy situation, only the interaction between positive/negative and performance/non-performance was found to be significant (see Table 4 for the means for each of the four discrete

response categories, $F = 20.210$, $p < 0.001$). Within programs previous success, both the previous coach's wins per season and number of NBA picks for the program were significant. The more successful the previous coach, the more difficult it was for the new coach to have a positive win differential average for the 4 years as indicated by the negative estimate of -0.136 ($F = 35.774$, $p < 0.001$). However, the more NBA picks a program had in the past, the more likely new coach would have a positive win differential (b = 0.278, $F = 15.565$, $p < 0.001$).

Table 2

Item results by category

Categories and Items	***F Test***	**Sig.**
Coach's Demographic Characteristics (R^2=.015)		
Education level	0.218	.641
Minority status	3.757	.024*
Age	0.001	.970
Coach's Experience (R^2=.058)		
Coach's previous playing experience	1.102	.348
Coach's previous job	0.804	.492
Number of years coaching	1.084	.298
Stability at previous job	0.067	.796
Was HC at previous job	0.792	.393
Number of years as a head coach	3.904	.049*
Coach's Ability (R^2=.031)		
Career win differential	21.598	<.001**
Vacancy Situation (R^2=.043)		
Positive vs. negative situation	0.787	.357
Performance vs non performance	0.049	.826
Interaction of +/- and performance	20.210	<.001**
Hiring Factors (R^2=.013)		
Source coach hired from	2.237	.064
Institution Characteristics (R^2=.006)		
Funding sources/Public or private	0.022	.232
Market DMA	0.002	.283
Institution's overall enrollment	2.301	.130
Program's Previous Success (R^2=.059)		
Previous coach's tenure	2.475	.116
Previous coach's wins per season	35.774	<.001**
Number of NBA Picks	15.565	<.001**

** - significant p<0.01
* - significant p<0.05

To further expand upon the vacancy situation results, when a coaching change occurred following a positive performance related change (e.g., a successful coach leaves for a *better* job), the following coach tends to have a lower level of success (mean win differential of -0.598). Similarly, if a coach left for negative, non-performance reasons (e.g., rules violations) the following coach also had a negative performance average over the next four years (mean win differential = -0.428). Both positive, non-performance (e.g., retirement) and negative performance (e.g., fired for poor performance) resulted in a positive win differential average for

the next four years for the next coach (mean win differentials of 0.495 and 0.778 respectively). While results were significant for analysis *within* vacancy situations and *within* hiring factors, it is important to note that none of the mean win differentials for any response category is greater than 1. Despite the significance of the results, these situations for causing the change or for the source of the new coach resulted in *less* than one additional average win over the next four years.

The second step of the analysis was to reduce the data to a single item per factor. The resulting three methods of developing a single item to represent the category were implemented. First, the coach's ability factor was already a single item measure of career head coach win differential. Second, two factors were reduced by combining all variable outcomes into a single multi-class variable. Vacancy situation was reduced to one four-class variable: 1) negative situation for non-performance reasons; 2) negative situation for performance reasons; 3) positive situation for non-performance reasons; and 4) positive situation for performance reasons. Similarly, hiring factor was reduced to a 5-class variable; 1) hired interim; 2) hired internal but not interim; 3) hired external one level down; 4) hired external same level; and 5) hired external one level up.

The third step in the process included four factors subjected to Exploratory LCA to determine the appropriate number of classes and class membership. Descriptors by class and variable are found in Table 3. First, the coach's demographic factor was found to have four classes. Education level was excluded due to low relationship to class outcomes. Therefore, the classes are as follows: 1) younger (mean age = 36.3) Caucasian; 2) younger (mean age = 36.9) minority; 3) older (mean age = 49.7) Caucasian; and 4) older (mean age 50.9) minority. Second, the coach's experience factor LCA identified three classes based upon a combination of experience as head coach (yes or no) and total years coaching experience. The classes are: 1) never been head coach; 2) lower levels of head coaching experience (mean years head coaching experience = 4.4); and 3) those with a high level of coaching experience (mean years head coaching experience = 15.8). Third, the institutional characteristics factor LCA identified five classes. Probability results indicate that enrollment and arena size are somewhat equivalent predictors of class membership, so arena size was excluded. Therefore, the classes are as follows: 1) small private; 2) large private; 3) small public; 4) mid-sized public; and 5) large public. Finally, program's previous success was categorized into five groups: 1) no NBA picks and low success (-33.22 mean win diff); 2) no NBA pics with high success (41.33 mean win diff); 3) some NBA picks (mean = 1.55) with low success (mean win diff = -22.07); 4) some NBA picks (mean = 2.72) with moderate success (mean win diff = 16.44); and 5) high NBA picks (mean = 21.87) and high success (mean win diff = 117.15).

Table 3

Class Descriptions Based on Means or Response Percentages by Group

Factors, Items and groups			**Means or Response Percentages**					
			Total Sample	Group 1	Group 2	Group 3	Group 4	Group 5
Coach's Demographic Classes		*n*=	664	214	116	230	104	
Education level	Bachelor	%	70.5	21.4	14.3	22.0	12.5	
	Master	%	29.5	10.8	3.2	12.5	3.2	
Minority status	Caucasian	%	67.5	32.2	0.0	34.6	0.0	
	Minority	%	32.6	0.0	17.5	0.0	15.7	
Age	*(means)*		43.42	36.29	36.87	49.70	50.85	
Coach's Experience Classes		*n*=	664	278	286	100		
Playing experience	College	%	67.6	28.3	30.2	9.0		
	Professional	%	15.7	7.3	6.2	2.3		
	No Pro or College	%	16.6	6.4	7.2	3.1		
Previous job	Assistant Coach	%	42.4	23.6	24.3	8.6		
	Head Coach	%	57.6	18.4	19.3	5.9		
Years coaching	*(means)*		16.21	11.8	16.2	24.2		
Yrs head coach	*(means)*		5.48	0.2	4.3	14.9		
Stability in years	*(means)*		3.04	0.1	3.5	7.4		
Coach's Ability	*(means)*		*No classes, continuous single variable*					
Vacancy Situation		*n*=	664	83.	106	251	224	
Circumstance	Positive	%	49.7	0.0	15.9	0.0	33.8	
	Negative	%	50.3	12.4	0.0	37.9	0.0	
Performance based	Performance	%	71.1	0.0	0.0	37.9	33.8	
	Non-Performance	%	28.9	12.4	15.9	0.0	0.0	
Hiring Factors		*n*=	664	18	104	74	197	271
Level hired from	One level down	%	11.1	0.0	0.0	11.1	0.0	0.0
	Same level	%	59.2	2.7	15.6	0.0	0.0	40.9
	One level up	%	29.7	0.0	0.0	0.0	29.7	0.0
Origin of the coach	Interim	%	2.7	2.7	0.0	0.0	0.0	0.0
	Internal, not interim	%	15.6	0.0	15.6	0.0	0.0	7.1
	External	%	81.7	0.0	0.0	11.1	29.7	22.9
Conference affiliation	Same conference	%	40.4	2.6	15.6	3.6	11.5	7.1
	Diff. conference	%	60.9	0.0	0.0	7.1	30.9	22.9
Institution Characteristics		*n*=	664	131	80	160	166	125
Funding source	Private		32.4	19.7	12.3	0.0	0.0	0.0
	Public		67.6	0.0	0.0	24.1	25.2	18.8
Arena capacity	*(means)*		8,168	5,625	7,320	7,051	9,741	10,995
Enrollment	*(means)*		11,380	3,270	9,248	6,640	14,612	23,965
Program's Previous Success		*n*=	736	309	209	58	72	88
Coach's tenure	*(means)*		6.80	5.67	7.74	5.05	4.72	11.41
Coach's win diff	*(means)*		12.08	-31.4	38.3	-22.5	16.4	122.6
NBA Picks	*(means)*		3.00	0.0	0.0	1.5	2.7	3.4

Note: The number of groups for each factor were determined by results from the LCA.

After all factors were subjected to appropriate classification and data reduction, the items that represent each of seven research factors were examined using the linear mixed models analysis in SPSS. Linear mixed-effects model analysis allows for the examination of both categorical (all the class membership variables) as well as the continuous measure of coach's ability. SPSS analyzes the categories as paired comparisons. The comparison category is identified in Table 4.

Table 4

Mixed Models Analysis

Categories and Items (*n*=664)	**Mean of DV**	***F* Test**	***t* Test**	**Sig.**
Coach's Demographic Characteristics		2.289		.077
Grp 1: Young Caucasian	0.230		2.438	.015*
Grp 2: Young minority	-0.336		0.720	.472
Grp 3: Older Caucasian	0.478		1.459	.145
Grp 4: Older minority	-0.379		#	
Coach's Experience		0.569		.772
Grp 1: No head coach experience	-0.336			
Grp 2: Low level of HC experience	0.208			
Grp 3: High level of HC experience	0.733		#	
Coach's Ability		7.449		.007**
Vacancy Situation		3.387		.018*
Grp 1: Negative, non-performance 0	-0.428		0.312	.755
Grp 2: Positive, non-performance 2	0.495		2.427	.016*
Grp 3: Negative, performance 1	0.778		2.179	.030*
Grp 4: Positive, performance 3	-0.598		#	
Hiring Factors		0.401		.808
Grp 1: Hired Interim 1	-0.886			
Grp 2: Internal, not interim 0	-0.362			
Grp 3: External from level down 2	0.259			
Grp 4: External same level 4	0.454		#	
Grp 5: External from level up 3	-0.053			
Institution Characteristics		0.335		.854
Grp 1: Small private	-0.005			
Grp 2: Large private	-0.120			
Grp 3: Small public	0.152			
Grp 4: Mid-size public	-0.009			
Grp 5: Large public	0.539	#		
Program's Previous Success		11.710		<.001**
Grp 1: No NBA picks, low success	0.807		1.977	.048*
Grp 2: No NBA picks, high success	-1.176		2.161	.031*
Grp 3: Some NBA picks, low success	1.330		2.542	.014*
Grp 4: Some NBA picks, med success	0.079		0.079	.937
Grp 5: High NBA picks, high success	0.022	#		

- reference group
** - significant p<0.01
* - significant p<0.05

Three of the seven factors indicated significant differences in win differential following a coaching change. First, the coach's ability item is significant (F = 7.449, df = 642, p = .007), although the estimate is small (B = .0059). This indicates that past performance as a head coach is related to ability to increase the conference win differential following a coaching change. Second, the influence of the situation that caused the vacancy was significant. Results support the common practice that changing coaches due to negative performance results in a positive change in wins, albeit only .78 of a conference win per year. When coaches leave for positive performance reasons (e.g., a successful coach leaves for a better job), and when there are non-performance negative reasons (e.g., rules violations), success of the program decreases by approximately .6 and .4 of a conference win per year, respectively.

Third, previous team success is significant. The means in Table 4 indicate programs that had low levels of performance (groups 1 and 3) see a significant increase after the change, 0.81 games and 1.33 games respectively per year. Programs that have had high levels of success, but no history of NBA draft picks, see a decrease in performance following a change (-1.17 games per year). Those programs with mid-level success see no significant change (see group 4).

Discussion

Based on the concept of reciprocal determinism found within the theory of social learning (Bandura, 1977), it is reasonable to believe that a variety of environmental, cognitive, and behavioral factors would be significantly related to coaching success. This study found most variables to be insignificant. However, some factors in the mixed models and individual analyses did prove significant. The most influential variable in both the individual analysis, as well as the mixed models analysis, was past success of the program where the coaching change occurred. At the individual analysis level, the more success the program had prior to a new coach, the fewer conference wins it would have after the coaching change relative to before the coaching change. This result may appear surprising considering the tradition and resources available at the most successful programs, but it does confirm the importance of context in a succession environment (Giambatista et al., 2005). One might expect any coach to step into a historically successful program and to do well. However, most successful college coaches are rarely fired. Instead, many coaches retire or move to a more prestigious coaching position, which leads to the conclusion that top-level coaching talent does contribute to a program's success. This finding supports Pfeffer and Blake (1986), Canella and Rowe (1995), who noted that coaches with the best win/loss records are generally promoted. However, these results also support vicious circle theory indicating that when coaches follow successful predecessors, turmoil can result with new leadership and systems. Such turmoil can result in worse performance (Adler et al., 2013; Fizel & D'Itri, 1999; Grusky, 1960).

Further examination of this variable through the mixed methods LCA procedure also reaffirmed that environmental variables are an effective way to understanding leadership success (Adler et al., 2013; Dohrn et al., 2015; Giambatista et al., 2005; Soebbing & Washington, 2011). For example, the combination of past team winning percentage and NBA-level talent help explain what happens to team performance after a coaching change. Low performing teams with no or few NBA draft picks saw a statistically significant increase in wins after the coaching change, 0.81 and 1.33 games respectively. This result suggests common sense theory may be at play where a new leader can inspire a program to improve (Grusky, 1963). Conversely, higher

performing teams demonstrated different results predicated on whether they had a history of NBA-level talent. High performing teams without a history of NBA draft picks saw a decrease in performance following the coaching change (-1.17 games). This result supports vicious circle theory (Grusky, 1960), where coaching change may have caused disruption. This finding is logical when one considers that successful coaches at programs with few NBA draft picks may have been exceeding expectations and targeted when vacancies at the most elite programs open. When these coaches leave, the disruption appears to cause a decline in program success. Still, high success programs, with a track record of NBA talent, continued to achieve success (mean win differential of .022) because they routinely produce NBA talent and established reputations of success. Given that other environmental variables in this study were not significant (e.g., arena size, public/private status, enrollment), the importance of the basketball environment and tradition (e.g., history of NBA picks) suggests the contextual influences may be program specific rather than institution specific.

Although the three traditional theories, as well as the environmental component of reciprocal determinism, partially explain the success of a new coach based on the nature of the program's previous success, there may be something else occurring. The results of the current study also suggest a regression to the mean in most situations, and strongly support that context is critical in evaluating the consequences of coaching succession. Winning programs without a history of NBA draft picks tend to do worse (vicious circle) and struggling programs tend to improve (common sense), but both results suggest a regression to the mean over time. Regression to the mean occurs when programs competing against others experience natural *ebbs* and *flows* because of many environmental and market-driven variables (Audus et al., 1997; Eitzen & Yetman, 1972). As institutions invest more into their programs and facilities, they hope for higher returns. As part of their investments, improvements in facilities, resources, and coaching at different institutions may neutralize each other. This neutralization would be particularly true when investigating wins within an athletic conference, where institutions often have similar resource profiles. The only exceptions are highly elite programs that have success and a history of NBA draft picks (e.g., Kentucky, North Carolina). It appears these programs are immune to a regression, perhaps because of the powerful traditions, consistent media exposure, and vast resources that make these programs attractive to the most skilled players and coaches.

The second most influential factor was head coaching ability. In both the individual and mixed models analysis, head coaching ability was significant. This finding suggests that the more previous success as a head coach, the more conference success in a new head coaching position, which has been supported in prior research (Canella & Rowe, 1995; Pfeffer & Blake, 1986). Support for social learning theory (Bandura, 1977) and reciprocal determinism accompany this finding because it implies that head coaches have engaged in a variety of social and behavioral interactions that have molded them into leaders that produce winning teams, including interactions with coaching mentors (Chartrand, Robbins, Morrill, & Boggs, 1990; Erickson, Côté, & Fraser-Thomas, 2007). Furthermore, this result reaffirms *social learning theory of career decision-making* (Krumboltz et al., 1976), which postulates that professionals ascend in their careers by learning field-specific attributes through their career experiences. Coaches who have already proven they understand the nuances of head coaching are most successful in their new positions (Smart & Wolfe, 2003). This finding is also logical when one considers that hiring a coach with prior head coaching experience would probably not occur unless that coach had a history of success. It also suggests that when hiring a head coach for Division I men's basketball, hiring previously successful head coaches from other successful

programs is preferred over hiring assistant coaches or head coaches with marginal success (see forthcoming section on nonsignificant variables).

The final factor significant in both the mixed models and individual analysis was the context surrounding the coaching change. Team performance improved when changes were made due to negative performance issues (e.g., fired) and in positive non-performance contexts (e.g., successful coach retires). Performance generally decreased when the preceding coach left for positive performance reasons (e.g., a successful coach left for a *better* job) and negative non-performance reasons (e.g., rules violations). The context for the coaching change can help explain the differences in the three original theories. For example, common sense theory (Grusky, 1963) seems to apply when a program is not winning (e.g., coach is fired for negative performance) and when a coach leaves a good program for reasons other than moving to a new job (e.g., coach retires after a successful career). Conversely, vicious circle theory (Grusky, 1960) applies when a successful coach leaves to fill the vacancy of a more prestigious position (positive performance) and when coaches leave for non-performance reasons (e.g., rules violations). These points are supported by previous work on vacancy situations when Johnson, Pierce, et al. (2015), found that college football coaching changes, particularly after poor coaching performances, negatively impacted academic performance. Moreover, results from both the current study and Johnson, Pierce, et al. (2015) suggest that the culture of the program, and the nature of the change, is particularly important for how successful the next coach becomes.

When considered in combination with the program success variable discussed above, it is obvious that the nature of the coaching change influences the success of a program. Poor performance most often precedes succession. This "might be the most consistent finding in the literature" (Giambatista, 2005, p. 964), and was confirmed in this study. It is apparent that a pattern of losing causes coaching turnover, but it is important to note that when successful coaches move on to more prestigious programs, other coaches move into their vacated positions. It is in these specific scenarios where the coaching carousel analogy is cemented, and where it is important to distinguish how such contextual differences influence the success of a new head coach. Thus, studies that have previously examined change as unidimensional, without considering vacancy context, likely missed a key component of coaching succession dynamics.

The vacancy context results are also important because they directly oppose the work of Fizel and D'Itri (1999), who noted that following a dismissed coach, the new coach would be less successful. Given that Fizel and D'Itri's work is one of only two studies to examine men's Division I college basketball coach succession, it is worth noting some important differences. The current study examined conference winning percentage, whereas Fizel and D'Itri used overall winning and an estimate of opponent strength. Additionally, Fizel and D'Itri examined team performance from 1984 to 1991, an era in basketball well before the current study timeframe. As time has passed, changes in the landscape of college basketball appear to have impacted the degree to which a new coach can be successful in differing vacancy contexts. Conference realignment, increased commercialization, and widespread technology use may also be contributing factors.

In addition to the significant mixed models findings, there were two variables that were significant in the individual analysis, but were not powerful enough to emerge as significant in the mixed models. First, under the coaching experience factor, number of years as a head coach was significant (p = .049). The factors of inside and outside successors, total years coaching, previous job, and playing experience were not significant. These findings are curious because in

both sport (Ehrhardt et al., 2011) and business (Giambatista et al., 2005), the inside/outside successor factor has been found as a clear predictor of success. Additionally, behavioral factors such as playing experience (Smart et al. 2008), and level of a new coach (Bosch, 2014) have been found to significantly influence success. These variables were included because they had direct empirical support, or were theoretically supported by social learning theory and reciprocal determinism (Bandura, 1977) as variables that could influence coaching success. The fact that the coaching experience factor did not emerge in the mixed models analysis, and that only the number of years as head coach was significant, puts into question how well the experience (i.e., behavioral) component of social learning theory applies to elite level head coaching positions. It is also critical to note that total years of experience as a coach (all positions) was not significant in predicting wins, but years as a head coach was significant, reaffirming the importance of context-specific leadership experience. This result may explain why Bosch (2014) did not find overall tenure significant for coaching success. The significance of time as a head coach, but not time in all coaching positions, is supported by Dohrn et al. (2015) who suggested that a combination of environment and time is important to develop coaches. This finding may also indicate why Avery et al. (2003) and Fizel and D'Itri (1997) found time less important than the quality of the learning environment.

Second, minority status was significant at the individual level, indicating that minority coaches were significantly less successful than Caucasian coaches. This result is curious because there were no apparent differences between the types of institutions where minority and Caucasian coaches were gaining employment. Given that only 32.6% of the sample was minority, it is possible that a handful of poor records could have skewed the results enough to indicate significance. Or, there could be many unidentified sociocultural and historical influences at play, which serve to systematically disadvantage minority coaches (Bozeman & Fay, 2013). A discussion of such influences is beyond the scope of this paper, but the fact that demographic factors were not significant in the mixed models analysis indicates that minority status is not a practical limitation for hiring purposes. Additionally, the pragmatic implication of all the variables discussed below indicates that minority status would play such a small role in conference win differentials that considering race is essentially a moot point.

Taken in aggregate, the results of the study appear intuitive in that successful coaches are likely to be successful in the future, and coaches moving to another job will leave a void (i.e., vicious circle theory). However, the contribution of this research goes far beyond these commonsensical findings. Many of the variables have never been investigated in the context of coach succession or men's basketball (e.g., vacancy circumstance, vacancy performance, previous coaching level, program previous success as defined by NBA picks), and this work represents an unprecedented number of variables investigated relative to coaching succession. Furthermore, what has been known only anecdotally has now been subject to empirical analysis. No more are people left to wonder how demographic characteristics compare to previous experience, or how the institutional context might be overcome by a basketball coach's ability. This paper provides empirical evidence to answer those previously held *common sense* assumptions.

The theoretical implications of these findings are important to note as well. While it is obvious that not all variables relative to coaching success can be captured or empirically investigated, the salient variables significant to coaching success in this study strongly support the influence of the behavior (coach ability) and environment (vacancy situation, program previous success) components of reciprocal determinism. In turn, these findings support the

larger social learning theory outlined by Bandura in 1977, as well as the social learning theory of career decision making identified by Krumboltz et al. in 1976. Understanding that coaching success is largely dependent on these differing and reciprocal components does confirm the various social learning theories as a suitable way to conceptualize coaching performance.

Perhaps the greatest contribution of this work is to debunk many of the popularly held anecdotal notions that a coach's playing experience, coaching experience, or previous place of employment are primary factors to consider in a hiring decision. Providing evidence of factors that are *not* significant to coaching success is as pragmatically important as demonstrating significant factors because that information can help athletic administrators streamline their decision-making process. Finally, this paper demonstrates that coaching turnover happens too frequently considering the relatively small changes in success after a head coaching change.

Managerial Implications

While this paper provides statistically significant results for variables that impact conference success, the managerial considerations of these findings within the highly commercialized structure of men's Division I basketball are paramount. There are three pragmatic implications for athletic administrators or coaches. First, the findings indicate that athletic administrators considering a coaching change should exercise caution. It is important to note that the factor within the mixed models analysis that contributed most to a change in conference wins per year was entering a program that had some NBA draft picks but recently low success. This factor indicated that coaches entering such a program would have 1.3 more wins per year. Hypothetically, if this program had 5 conference wins and 13 losses before the coaching change, it would be expected to have 6.3 wins and 11.7 losses one year after the change. Although a statistically significant improvement, this change is relatively small in the world of intercollegiate athletics. After three years, the record would be approximately 9 wins and 9 losses, assuming all other factors remain constant. The other variables are even less pronounced, with the lowest statistically significant variable indicating that one half of a game more per year would occur when the previous coach left for positive nonperformance reasons (e.g., retirement).

Even more telling may be that many of the variables thought to play a part in coaching success (e.g., coaching experience) were not significant at all. Thus, expecting dramatic changes in conference wins is unlikely. In fact, a coaching change could potentially be damaging to a program if new coaches have less success than their predecessor. This point is exacerbated when the results suggest that athletic directors cannot expect much in return for their investments of time, energy, and resources spent during coaching searches. Many such searches can cost into the hundreds of thousands of dollars to conduct, with an incredible amount of time dedicated to the logistics of traveling, interviewing, and coordinating high-profile searches (Babb, 2015). Nonetheless, the coaching carousel continually turns because stakeholders want their teams to win. "College basketball is a multibillion-dollar sport. With so much money at stake -- along with the prestige and exposure that comes with consistent success -- there's always pressure on coaches to win" (Medcalf, 2012, para 1). For many men's Division I basketball programs, a regression to the mean is the likely result following coaching turnover. Combine a regression effect with the fact that any on-court results are likely to be negligible; it is logical to conclude that coaching changes occur more often than they probably should.

Second, if athletic administrators have no choice whether to retain a coach (e.g., coach retires or resigns), the decision of selecting a new coach can be informed by this research. For example, as college athletic directors begin the search process for a men's basketball coach, they must determine what they value, and what characteristics of a coach will lead to success. While there are many variables beyond the scope of this study that may play a role, this research offers evidence that athletic administrators should recognize coaching ability (career win differential) as a logical top predictor. Perhaps more importantly, and critical to the novelty of this study, is that many factors often thought to be logical hiring considerations are insignificant (e.g., coaching experience, playing experience, age, educational level, number of years coaching, previous coaching position). Focusing their efforts on these logical, yet insignificant factors, could lead to poor decisions based on faulty beliefs. Additionally, because success appears to be much more the result of program infrastructure and tradition than the characteristics of coaching candidates, athletic directors may be better served to hire a coach for the least amount of money possible, while investing in programmatic resources and culture.

Third, this study provides practical implications for coaches who are managing their careers. Coaches may find themselves at a crossroad where they need to determine if taking a head coach position within a smaller program is preferred over an assistant coaching position at a large university. Or, they may have multiple coaching offers and are trying to determine where they would be likely to have the most success. No matter the case, it is important for coaches to define their goals. If their goal is to be a successful head coach at a NCAA Division I institution, this study clearly indicates that having head coaching success translates into more head coaching success. Moreover, making decisions about head or assistant coaching, or Division II vs. Division I appear to be secondary to the culture of the program. If a choice is possible, taking head coaching positions at institutions with prior NBA draft picks, where previous coaches were not successful, or where successful coaches leave for non-performance related issues (e.g., retiring), would lend themselves to the best results. Making career decisions using this information could lead to a more satisfying and successful career ascension.

Limitations / Future Research

While this study extended the breadth and depth of coaching succession literature, there were some limitations. First, the study was quantitative in nature and meant to generalize results across all coaching changes. Qualitative assessments for both successful and unsuccessful coaches could help triangulate the data in ways that could guide further analysis. For example, interviewing coaches whose career success did not support the results of this study could help to identify specific variables that would potentially help a coach avoid regressing to the mean. The few coaches who have demonstrated dramatic changes in the success of their programs could be particularly important to determine why they were outliers in a profession where coaching change appears to be largely inconsequential. Second, the variables were limited to archival retrieval and did not include all potential intervening variables that could predict coaching success. For example, assessing personality characteristics of coaches at the time of hiring, or completing a comprehensive analysis on team athletic talent or recruiting, are a few examples that could provide further insight. Based on the specific results of this study, further analysis on specific coaching experiences related to social learning (e.g., mentorship behaviors), as well as institutional context (e.g., specific line item budget allocations) could add to the current findings. Finally, the contextual results of the study would encourage future research that makes

comparisons between smaller and similar contexts, conferences, or institutions. These *apples to apples* resource comparisons could identify variables unique to specific resource contexts. This limitation is particularly important given that the best-case scenarios result in little more than one more conference win per season.

Conclusion

The current study extended the leadership succession literature by examining 17 variables and 7 factors 4 years before and 4 years after a coaching change. Although all the factors were potentially related to conference coaching success based on social learning theory and reciprocal determinism, only previous program success, coach ability (i.e., head coach record), and context of the vacancy situation proved significant. However, the relatively small impact of each variable, in combination with no impact from demographic characteristics, calls into question the practical implications of changing head coaches. In cases where a coaching hire is required, athletic directors can use these results to make more informed hiring and program considerations. Specifically, hiring current head coaches with good records, no matter where they came from, is advised. Yet, athletic directors should note that the impact of a new head coach appears very small overall, especially in comparison to the program's previous success and how the previous coach left the position. Perhaps this is the most revealing aspect of this research – that coaching changes do not have much practical impact on conference wins, oftentimes less than one additional win per year. Thus, expecting a new head coach to make significant progress without changing other environmental variables may be a feckless exercise. From a more global perspective, this study contributes to the coaching succession literature in ways that transcend college sports in the United States. In general, this study confirms that coaching changes are largely inconsequential to an athletic team's success, a position regularly found within both American and international studies, and at both the amateur and professional levels (Anderson, 2011).

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